

WHAT IS CLAIMED IS:

1 1. An immunogenic composition comprising an isolated polypeptide,
2 wherein the amino acid sequence of the polypeptide is at least 80% identical to SEQ ID
3 NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, or SEQ ID NO:6, and
4 wherein the composition induces production of an antibody that specifically binds to equine
5 IgE.

1 2. The composition of claim 1, wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:1.

1 3. The composition of claim 1, wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:2.

1 4. The composition of claim 1, wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:3.

1 5. The composition of claim 1, wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:4.

1 6. The composition of claim 1, wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:5.

1 7. The composition of claim 1, wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:6.

1 8. The composition of claim 1, wherein the composition includes a carrier
2 molecule.

3 9. The composition of claim 1, wherein the composition includes an
4 adjuvant.

1 10. A composition comprising an antibody that specifically binds to a
2 polypeptide at least 80% identical to SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID
3 NO:4, SEQ ID NO:5, or SEQ ID NO:6.

1 11. The composition of claim 10, wherein the antibody specifically binds
2 to a polypeptide at least 80% identical to SEQ ID NO:1.

1 12. The composition of claim 10, wherein the antibody specifically binds
2 to a polypeptide at least 80% identical to SEQ ID NO:2.

1 13. The composition of claim 10, wherein the antibody specifically binds
2 to a polypeptide at least 80% identical to SEQ ID NO:3.

1 14. The composition of claim 10, wherein the antibody specifically binds
2 to a polypeptide at least 80% identical to SEQ ID NO:4.

1 15. The composition of claim 10, wherein the antibody specifically binds
2 to a polypeptide at least 80% identical to SEQ ID NO:5.

1 16. The composition of claim 10, wherein the antibody specifically binds
2 to a polypeptide at least 80% identical to SEQ ID NO:6.

1 17. The composition of claim 10, wherein the composition is antiserum.

1 18. The composition of claim 10, wherein the antibody is labeled.

1 19. The composition of claim 18, wherein the antibody is labeled with an
2 enzyme capable of generating a detectable signal.

1 20. The composition of claim 10, wherein the antibody is labeled with
2 radioactive iodine.

1 21. The composition of claim 10, wherein the antibody is labeled with
2 biotin.

1 22. An antibody that specifically binds to equine IgE made by the process
2 of immunizing an animal with a polypeptide at least 80% identical to SEQ ID NO:1, SEQ ID
3 NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, or SEQ ID NO:6.

1 23. The antibody of claim 22 wherein the polypeptide is at least 80%
2 identical to SEQ ID NO:1.

1 24. The antibody of claim 22 wherein the polypeptide is at least 80%
2 identical to SEQ ID NO:2

1 25.. The antibody of claim 22 wherein the polypeptide is at least 80%
2 identical to SEQ ID NO:3.

1 26. The antibody of claim 22 wherein the polypeptide is at least 80%
2 identical to SEQ ID NO:4.

1 27. The antibody of claim 22 wherein the polypeptide is at least 80%
2 identical to SEQ ID NO:5.

1 28. The antibody of claim 22 wherein the polypeptide is at least 80%
2 identical to SEQ ID NO:6.

1 29. A method of making an antibody that specifically binds to equine IgE,
2 the method comprising:

3 immunizing an animal with a composition further comprising an isolated
4 polypeptide, wherein the amino acid sequence of the polypeptide is at least 80% identical to
5 SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, or SEQ ID
6 NO:6; and

7 collecting antiserum from the animal.

1 30. The method of claim 29 wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:1.

1 31. The method of claim 29 wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:2.

1 32. The method of claim 29 wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:3.

1 33. The method of claim 29 wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:4.

1 34. The method of claim 29 wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:5.

1 35. The method of claim 29 wherein the amino acid sequence of the
2 polypeptide is at least 80% identical to SEQ ID NO:6.

1 36. The method of claim 29 wherein the composition includes an adjuvant.

1 37. The method of claim 29 wherein the composition includes a carrier
2 molecule.

1 38. A method of detecting equine immunoglobulin E protein in a
2 biological sample, the method comprising:

3 contacting the sample with the composition of claim 10, thereby forming an
4 antigen/antibody complex; and

5 detecting the presence or absence of the antigen/antibody complex.

1 39. The method of claim 38, wherein the antibody is immobilized on a
2 solid surface.

1 40. The method of claim 38, wherein the antigen is immobilized on a solid
2 surface.

1 41. The method of claim 38, wherein the antibody is labeled, such that the
2 antigen/antibody complex can be detected.

1 42. The method of claim 41, wherein the label is an enzyme capable of
2 generating a detectable signal.

1 43. The method of claim 41, wherein the label is radioactive iodine.

1 44. The method of claim 41, wherein the label is biotin.

1 45. The method of claim 41, wherein the complex is detected using a
2 second labeled antibody.

1 46. The method of claim 41, wherein the biological sample is serum.

1 47. A kit for detection of equine immunoglobulin E in a biological sample,
2 the kit comprising:

3 the composition of claim 10; and

4 means for detecting specific binding of said antibody to equine
5 immunoglobulin E.